

CERTIFIED MILL TEST REPORT



**The Best Value -
Price, Quality, Service
All The Time.**

LOG NO. F00000000069702

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BONNEY FORGE CORPORATION

P.O. BOX 330 • 14496 CROGHAN PIKE • MOUNT UNION, PA 17066-0330

(814) 542-2545 • (800) 345-7546 • FAX (814) 542-4906

www.bonneyforge.com

CUSTOMER: WFI INTERNATIONAL, INC.

DATE 02/18/2015

CUSTOMER

BONNEY ORDER NO. B000182557

ORDER NO.: BD00071382

PO#329

Ref C1512065

SHIP TO: AMERICAN DISPATCH
302 QUIVIRA DRIVE
LAREDO TX 78045
United States

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
1	30	59422	1 3000 HOT-DIP 45EL T SA/A105 Al 0.028 C 0.200 Co 0.004 Cr 0.030 Cu 0.060 Mn 1.030 Mo 0.007 N 0.004 Nb 0.014 Ni 0.030 P 0.006 S 0.018 Si 0.210 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 77,835 Y/S(PSI) 52,207 EL(%) 33.90 RA(%) 62.41 Brinell 144 BHN 141 BHN
		59086	1 3000 HOT-DIP 45EL T SA/A105 Al 0.025 C 0.210 Co 0.003 Cr 0.040 Cu 0.090 Mn 1.000 Mo 0.006 N 0.002 Nb 0.012 Ni 0.030 P 0.010 S 0.020 Si 0.230 V 0.003 CE(Long Formula) = 0.39 T/S(PSI) 80,470 Y/S(PSI) 49,947 EL(%) 30.45 RA(%) 61.58 Brinell 144 BHN 144 BHN
2	50	59706	1/4 3000 A105 90EL T SA/A105 Al 0.028 C 0.210 Co 0.003 Cr 0.070 Cu 0.070 Mn 1.040 Mo 0.005 N 0.003 Nb 0.012 Ni 0.020 P 0.006 S 0.020 Si 0.180 V 0.003 CE(Long Formula) = 0.40 T/S(PSI) 74,321 Y/S(PSI) 50,677 EL(%) 33.90 RA(%) 62.75 Brinell 135 BHN 135 BHN
3	50	59709	1 3000 A105 90EL T SA/A105 Al 0.025 C 0.210 Co 0.003 Cr 0.040 Cu 0.100 Mn 1.000 Mo 0.006 N 0.003 Nb 0.012 Ni 0.030 P 0.008 S 0.020 Si 0.210 V 0.003 CE(Long Formula) = 0.40 T/S(PSI) 74,336 Y/S(PSI) 47,534 EL(%) 34.00 RA(%) 60.78 Brinell 132 BHN 135 BHN

We certify that the data on this sheet is a true copy taken from our records of material furnished us by the production mill, or as obtained by additional laboratory checks.

by Billie Jo Clemens

Billie Jo Clemens
QUALITY PROCESS MANAGER

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			CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

4	50	59611	1 3000 A105 45EL S	SA/A105
Al 0.035 C 0.210 Co 0.002 Cr 0.060 Cu 0.030 Mn 1.010 Mo 0.006 N 0.003				
Nb 0.014 Ni 0.020 P 0.004 S 0.015 Si 0.220 V 0.003				
CE(Long Formula) = 0.40				
T/S(PSI) 76,252 Y/S(PSI) 49,800 EL(%) 34.40 RA(%) 59.37				
Brinell 144 BHN 139 BHN				
5	30	59627	1 6000 A105 90EL S	SA/A105
Al 0.033 C 0.200 Co 0.003 Cr 0.030 Cu 0.020 Mn 1.040 Mo 0.004 N 0.002				
Nb 0.015 Ni 0.020 P 0.004 S 0.018 Si 0.220 V 0.003				
CE(Long Formula) = 0.38				
T/S(PSI) 72,424 Y/S(PSI) 48,879 EL(%) 35.65 RA(%) 57.39				
Brinell 130 BHN 135 BHN				
6	50	59640	2 6000 A105 90EL S	SA/A105
Al 0.030 C 0.200 Co 0.004 Cr 0.060 Cu 0.140 Mn 0.980 Mo 0.011 N 0.003				
Nb 0.015 Ni 0.040 P 0.005 S 0.019 Si 0.210 V 0.003				
CE(Long Formula) = 0.39				
T/S(PSI) 75,961 Y/S(PSI) 49,935 EL(%) 30.95 RA(%) 59.94				
Brinell 135 BHN 135 BHN				
7	50	59719	2 3000 A105 TEE T	SA/A105
Al 0.027 C 0.200 Co 0.004 Cr 0.130 Cu 0.090 Mn 1.010 Mo 0.022 N 0.003				
Nb 0.012 Ni 0.040 P 0.006 S 0.022 Si 0.180 V 0.003				
CE(Long Formula) = 0.41				
T/S(PSI) 74,900 Y/S(PSI) 49,068 EL(%) 34.15 RA(%) 64.71				
Brinell 132 BHN 132 BHN				

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LAREDO TX 78045

United States

GRADE OR SPECIFICATION NO.
CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:

ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO.
		59564	2 3000 A105 TEE T SA/A105 Al 0.029 C 0.200 Co 0.003 Cr 0.040 Cu 0.070 Mn 1.010 Mo 0.004 N 0.003 Nb 0.015 Ni 0.020 P 0.007 S 0.024 Si 0.240 V 0.004 CE(Long Formula) = 0.38 T/S(PSI) 73,622 Y/S(PSI) 48,879 EL(%) 34.55 RA(%) 62.75 Brinell 135 BHN 135 BHN
8	10	59594	11/2X11/2X 1 3000 A105 TEE S SA/A105 Al 0.029 C 0.210 Co 0.002 Cr 0.050 Cu 0.060 Mn 0.980 Mo 0.004 N 0.003 Nb 0.012 Ni 0.020 P 0.008 S 0.018 Si 0.200 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 74,831 Y/S(PSI) 49,658 EL(%) 34.90 RA(%) 63.38 Brinell 139 BHN 139 BHN
10	10	59594	11/2X11/2X 3/4 3M A105 TEE S SA/A105 Al 0.029 C 0.210 Co 0.002 Cr 0.050 Cu 0.060 Mn 0.980 Mo 0.004 N 0.003 Nb 0.012 Ni 0.020 P 0.008 S 0.018 Si 0.200 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 74,831 Y/S(PSI) 49,658 EL(%) 34.90 RA(%) 63.38 Brinell 139 BHN 139 BHN
11	10	59609	1 X1 X 1/2 3000 A105 TEE S SA/A105 Al 0.024 C 0.210 Co 0.003 Cr 0.030 Cu 0.050 Mn 1.030 Mo 0.005 N 0.002 Nb 0.013 Ni 0.020 P 0.005 S 0.025 Si 0.200 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 73,091 Y/S(PSI) 48,333 EL(%) 34.50 RA(%) 63.14 Brinell 139 BHN 137 BHN

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ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO.	CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
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12	30	59609	1 X1 X 3/4 3000 A105 TEE S	SA/A105 Al 0.024 C 0.210 Co 0.003 Cr 0.030 Cu 0.050 Mn 1.030 Mo 0.005 N 0.002 Nb 0.013 Ni 0.020 P 0.005 S 0.025 Si 0.200 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 73,091 Y/S(PSI) 48,333 EL(%) 34.50 RA(%) 63.14 Brinell 139 BHN 137 BHN
13	50	59624	2 X2 X 1 3000 A105 TEE S	SA/A105 Al 0.028 C 0.200 Co 0.005 Cr 0.040 Cu 0.090 Mn 0.980 Mo 0.008 N 0.004 Nb 0.015 Ni 0.040 P 0.006 S 0.018 Si 0.220 V 0.003 CE(Long Formula) = 0.38 T/S(PSI) 73,927 Y/S(PSI) 48,703 EL(%) 33.90 RA(%) 56.61 Brinell 139 BHN 139 BHN
14	10	59711	2 X2 X 1 1/2 3000 A105 TEE S	SA/A105 Al 0.022 C 0.200 Co 0.003 Cr 0.030 Cu 0.060 Mn 1.000 Mo 0.004 N 0.003 Nb 0.014 Ni 0.020 P 0.005 S 0.022 Si 0.210 V 0.003 CE(Long Formula) = 0.38 T/S(PSI) 75,016 Y/S(PSI) 48,720 EL(%) 32.80 RA(%) 59.53 Brinell 132 BHN 132 BHN
15	100	59696	1 3000 A105 TEE S	SA/A105 Al 0.020 C 0.210 Co 0.004 Cr 0.040 Cu 0.040 Mn 1.080 Mo 0.008 N 0.003 Ni 0.040 P 0.004 S 0.023 Si 0.230 V 0.003 CE(Long Formula) = 0.41 T/S(PSI) 74,023 Y/S(PSI) 48,901 EL(%) 34.70 RA(%) 63.95 Brinell 135 BHN 135 BHN

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ITEM	QUANTITY	LOT NO.	GRADE OR SPECIFICATION NO. CHEMICAL ANALYSIS, PHYSICAL PROPERTIES, REMARKS:
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		59653	1 3000 A105 TEE S	SA/A105
			Al 0.027 C 0.200 Co 0.004 Cr 0.040 Cu 0.060 Mn 1.010 Mo 0.008 N 0.004 Nb 0.009 Ni 0.040 P 0.005 S 0.024 Si 0.210 V 0.003 CE(Long Formula) = 0.39 T/S(PSI) 75,889 Y/S(PSI) 49,324 EL(%) 35.90 RA(%) 61.68 Brinell 139 BHN 139 BHN	
16	50	59281	11/2 3000 A105 TEE S	SA/A105
			Al 0.025 C 0.200 Co 0.004 Cr 0.050 Cu 0.060 Mn 1.050 Mo 0.007 N 0.003 Nb 0.012 Ni 0.030 P 0.009 S 0.018 Si 0.250 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 80,569 Y/S(PSI) 51,333 EL(%) 30.45 RA(%) 61.22 Brinell 150 BHN 147 BHN	
		59372	11/2 3000 A105 TEE S	SA/A105
			Al 0.028 C 0.210 Co 0.004 Cr 0.030 Cu 0.040 Mn 1.050 Mo 0.004 N 0.003 Nb 0.012 Ni 0.020 P 0.007 S 0.019 Si 0.240 V 0.004 CE(Long Formula) = 0.40 T/S(PSI) 78,110 Y/S(PSI) 48,651 EL(%) 34.40 RA(%) 60.44 Brinell 135 BHN 139 BHN	
17	50	59592	2 3000 A105 TEE S	SA/A105
			Al 0.026 C 0.200 Co 0.008 Cr 0.050 Cu 0.060 Mn 1.000 Mo 0.009 N 0.003 Nb 0.012 Ni 0.040 P 0.007 S 0.020 Si 0.230 V 0.004 CE(Long Formula) = 0.39 T/S(PSI) 75,572 Y/S(PSI) 49,275 EL(%) 33.95 RA(%) 62.68 Brinell 139 BHN 141 BHN	

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18	11	58801	3/4 3000 A105 TEE S	SA/A105
Al 0.021 C 0.213 Co 0.003 Cr 0.040 Cu 0.070 Mn 1.060 Mo 0.005 N 0.002				
Nb 0.014 Ni 0.020 P 0.012 S 0.018 Si 0.210 V 0.004				
CE(Long Formula) = 0.41				
T/S(PSI) 77,997 Y/S(PSI) 51,245 EL(%) 29.85 RA(%) 63.76				
Brinell 141 BHN 147 BHN				

18	19	59618	3/4 3000 A105 TEE S	SA/A105
Al 0.025 C 0.200 Cb 0.000 Co 0.003 Cr 0.030 Cu 0.060 Mn 1.070 Mo 0.005				
Nb 0.012 Ni 0.020 P 0.006 S 0.023 Si 0.200 V 0.004				
CE(Long Formula) = 0.39				
T/S(PSI) 73,407 Y/S(PSI) 48,424 EL(%) 33.05 RA(%) 65.27				
Brinell 139 BHN 137 BHN				

1. THE MATERIAL SUPPLIED IS FREE FROM MERCURY AND RADIUM CONTAMINATION.
2. THE FITTINGS SUPPLIED ARE IN ACCORDANCE WITH PURCHASE ORDER SPECIFICATIONS.
3. THE MATERIAL SUPPLIED MEETS THE REQUIREMENTS OF NACE MRO175/ISO 15156-2.
4. CERTIFYING ASTM A105-13 / ASME SA105-10 EDITION.
5. THE FITTINGS SUPPLIED WERE NOT SUBJECTED TO ANY FORM OF WELD REPAIR.
6. THE PRODUCT SUPPLIED WAS INSPECTED IN ACCORDANCE WITH EN 10204:2004 EDITION TYPE 3.1 INSPECTION DOCUMENT. (EUROPEAN STANDARD)
7. ELONGATION TEST RESULTS ARE OBTAINED USING STANDARD ROUND SPECIMEN, 2 INCH OR 50 MM GAGE LENGTH.
8. THE MATERIAL SUPPLIED IS IN THE AS-FORGED CONDITION.

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